



GPS Data to Map Corona High-risk Zones

Why in News

Recently, the **Brihanmumbai Municipal Corporation (BMC)** has decided to use **Global Positioning System (GPS) data to map high-risk zones** in the city and the number of positive cases in the wake of the **COVID-19 pandemic**.

Key Points

- Till now, BMC had refrained from revealing details pertaining to **COVID-19-afflicted** patients to mitigate fear and prevent stigmatization.
- However, with a spike in the numbers, **lockdown** and quarantine violations, the civic body has decided to map the high-risk zones to alert citizens to stay away from these areas and follow lockdown instructions.
- Ward officers will ensure **mandatory home-delivery of essentials like medicines and grocery** items to restrict citizens movement in these zones.
- **Other initiatives:**
 - To **strengthen the healthcare facilities**, final-year medical and nursing students will be drafted into its workforce and given charge of OPDs and administrative duties at various civic-run hospitals.
 - To **decongest major hospitals** and **effectively use isolation beds** for patients, BMC has decided to categorise patients based on the **three categories-**
 - asymptomatic patients below 55 years and without any co-morbidity.
 - asymptomatic or mildly symptomatic patients above 55 years.
 - symptomatic patients.

Global Positioning System

- It is a **Global Navigation Satellite System (GNSS)**, used to determine the ground position of an object.
- It is a **US-owned utility** that provides users with **positioning, navigation, and timing (PNT) services**.
- **Services Provided:**
 - The **civilian service** is **freely available** to all users on a continuous, worldwide basis.
 - The **military service** is available to **US and allied armed forces** as well as **approved Government agencies**.
- Other GNSS include **European Union's Galileo, Russia's GLONASS, China's BeiDou Navigation Satellite System** and **India's Navigation in Indian Constellation (NavIC)**.

Navigation in Indian Constellation

- It has been developed by the **Indian Space Research Organization (ISRO)**.
- The **main objective** is to provide reliable position, navigation and timing services over India and its neighbourhood

- It is named after Indian fishermen and navigators and will provide **two types of services-**
 - **Standard Positioning Service (SPS)** is meant for the **general public**.
 - **Restricted Service (RS)** is an **encrypted service meant for authorised users and agencies**.
- Unlike the widely used **GPS which includes 24 satellites, NavIC has 7 satellites** and their range is within India and its adjoining regions extending up to 1,500 km from the country's border.
- Technically **satellite systems with more satellites provide more accurate positioning** information.
- However, compared to **GPS which has a position accuracy of 20-30 metres**, the **NavIC is able to pinpoint location to an estimated accuracy of under 20 metres**.

Source: IE

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